CITY MULTI Model: PURY-HP144TSKMU-A-H

MITSUBISHI ELECTRIC

(Consists of Two PURY-HP72TKMU-A and One CMY-R100CBK2 Twinning Kit)

Job Name: Location:

Engineer Name: Contractor:

System No.: Date:

OUTDOOR VRF SYSTEM FEATURES

- Innovative flash technology enables tremendous heating capacity at lower outdoor temperatures
- Built-in base pan heater to prevent ice in drain pan
- Air-source, simultaneous cooling and heating
- Provides up to 100% of rated heating capacity at 0ºF (-17.7ºC) in standard mode.
- Modular design; two small capacity units can be piped together to form a large capacity system
- Connects to CITY MULTI indoor units
- Controlled via CITY MULTI Controls Network (CMCN)
- Minimum outdoor temperature for simultaneous cooling and heating operation is -20ºC
- Inverter-driven (variable speed) scroll compressor
- External finish: Pre-coated Galvanized-steel Sheets
- Operating Temperature Range
  Cooling (Outdoor): 23° ~ 115°F (-5° ~ 46°C) DB
  Heating (Outdoor): -13° ~ 60°F (-25° ~ 15.5°C) WB

PURY-HP72TKMU-A-H PURY-HP72TKMU-A-H

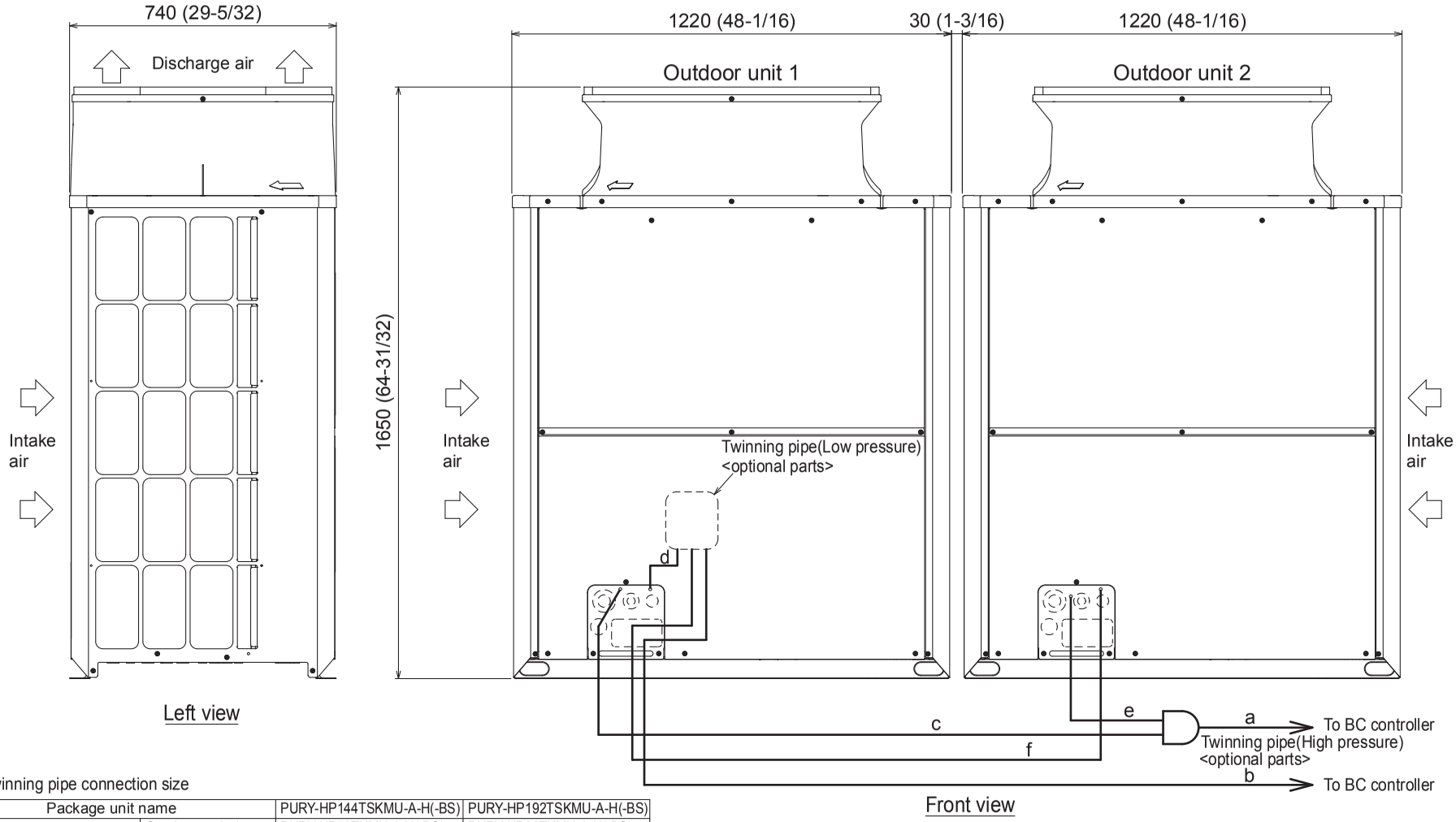
OPTIONAL PARTS

- ☐ Twinning Kit*……..CMY-R100CBK2
- ☐ T-Branch Joint (≤ 72,000 Btu/h)…….CMY-Y102SS-G2
- ☐ T-Branch Joint (73,000 - 144,000 Btu/h)…….CMY-Y102LS-G2
- ☐ T-Branch Joint (145,000 - 234,000 Btu/h)…….CMY-Y202S-G2
- ☐ Joint Adapter (Port Connector > 54,000 Btu/h)…….CMY-R160C-J
- ☐ Main BC Controller…….CMB-P108/1010/1013/1016NU-GA/1016NU-HA
- ☐ Sub BC Controller……CMB-P104/108NU-GB/P1016NU-HB

* Twinning Kit is necessary to combine the refrigerant flows of the modules and is sold separately.

Specifications		System	Module 1	Module 2
Unit Type		PURY-HP144TSKMU-A-H	PURY-HP72TKMU-A-H	PURY-HP72TKMU-A-H
Nominal Cooling Capacity	Btu/h	144,000	72,000	72,000
Nominal Heating Capacity	Btu/h	160,000	80,000	80,000
External Dimensions (H x W x D)	In. / mm	Refer to Module Data	64-31/32 x 48-1/16 x 29-5/32 / 1,650 x 1,220 x 740	64-31/32 x 48-1/16 x 29-5/32 / 1,650 x 1,220 x 740
Net Weight	Lbs. / kg	1,104/ 500	552 / 250	552/ 250
Electrical Power Requirements	Voltage, Phase, Hertz	Refer to Module Data**	208 / 230V, 3-phase, 60Hz**	
Cooling Power Input	kW	10.85	Refer to System Data	
Heating Power Input	kW	13.16		
Cooling Current (208/230V)	A	33.4 / 30.2	Refer to System Data	
Heating Current (208/230V)	A	40.5 / 36.7		
Minimum Circuit Ampacity (MCA)**	A	Refer to Module Data**	44 / 40**	44 / 40**
Maximum Circuit Breaker Size**	A	Refer to Module Data**	60**	60**
Piping Diameter				
From Twinning Kit to Indoor Units (Brazed) (In. / mm)	Liquid (High Pressure)	7/8 / 22.2	Refer to System Data	
	Gas (Low Pressure)	1-1/8 / 28.58		
From Modules to Twinning Kit (Brazed) (In. / mm)	Liquid (High Pressure)	Refer to Module Data	5/8 / 15.88	5/8 / 15.88
	Gas (Low Pressure)		3/4 / 19.05	3/4 / 19.05
Indoor Unit	Total Capacity	50 to 150% of ODUs	Refer to System Data	
	Model / Quantity	P06 ~ P96 / 1 to 36		
Sound Pressure Level	dB(A)	61	58	58
Fan				
Type x Quantity		Refer to Module Data	Propeller Fan x 1	Propeller Fan x 1
Airflow Rate	CFM		6,200	6,200
Direct-drive Inverter Motor Output	kW		0.92	0.92
Compressor Operating Range		Cooling: 15% to 100% Heating: 7% to 100%	Refer to System Data	
Compressor Type x Quantity		Refer to Module Data	Inverter-driven Scroll Hermetic x 1	Inverter-driven Scroll Hermetic x 1
Compressor Motor Output	kW		5.3	5.3
Compressor Crankcase Heater	kW		-	-
Refrigerant		Refer to Module Data	R410A	
Lubricant			MEL32	
High-pressure Protection Device		Refer to Module Data	601 psi / 4.15 MPa	601 psi / 4.15 MPa
Compressor / Fan Protection Device			Overheat Protection / Thermal Switch	Overheat Protection / Thermal Switch
Inverter Protection Device			Overheat / Overcurrent Protection	Overheat / Overcurrent Protection

** Each individual module requires a separate electrical connection. Reference electrical data for each individual module.



Twinning pipe connection size

Package unit name			PURY-HP144TSKMU-A-H(-BS)	PURY-HP192TSKMU-A-H(-BS)
Component unit name	Outdoor unit 1		PURY-HP72TKMU-A-H(-BS)	PURY-HP96TKMU-A-H(-BS)
	Outdoor unit 2		PURY-HP72TKMU-A-H(-BS)	PURY-HP96TKMU-A-H(-BS)
Outdoor Twinning Kit(optional parts)			CMY-R100CBK2	
BC controller~Twinning pipe	High pressure	a	ø22.2(7/8)	
	Low pressure	b	ø28.58(1-1/8)	

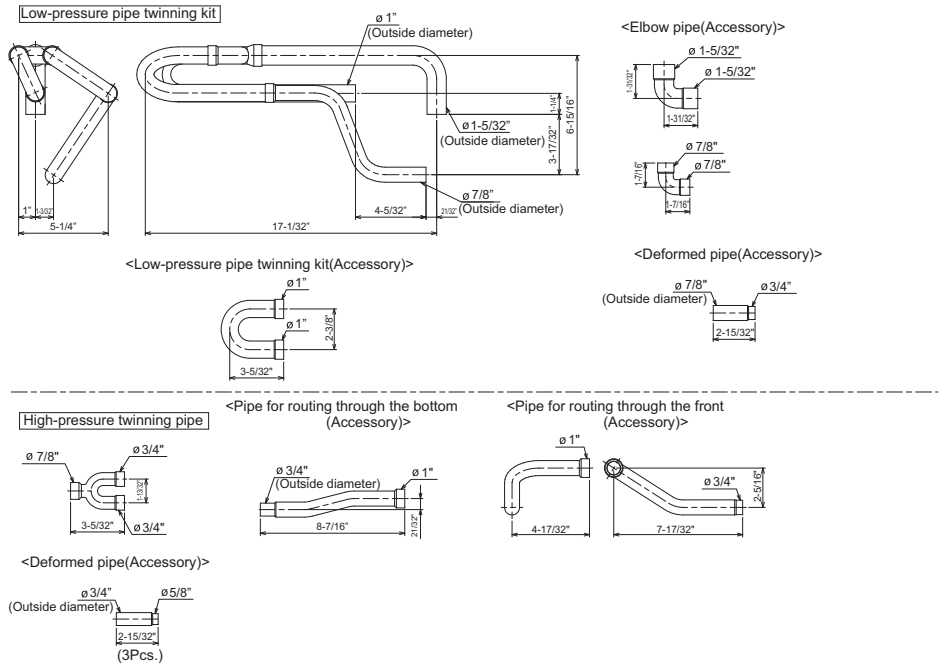
	Unit model	HP144				HP192			
	Component unit model	HP72		HP72		HP96		HP96	
Twinning Kit ~Outdoor unit	High pressure	c	ø15.88(5/8)	e	ø15.88(5/8)	c	ø19.05(3/4)	e	ø19.05(3/4)
	Low pressure	d	– (Note 5)	f	ø19.05(3/4)	d	– (Note 5)	f	ø22.2(7/8)

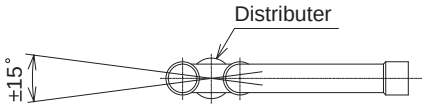
Unit : mm(in)

Note 1. Connect the pipes as shown in the figure above. Refer to the table aboveforthe pipe size.
2. Twinning pipe (High pressure) should not be tilted more than 15 degrees from the horizontal plane.
Be sure to see the Installation Manual for details of Twinning pipe installation.
3. The pipe section before the Twinning pipe (section "a" in the figure) must have at least 500mm(19-11/16) of straight section (*including the straight pipe that is supplied with the Twinning pipe).
4. Only use the Twinning pipe by Mitsubishi (optional parts).
5. Connect the outdoor unit 1 with the Twinning pipe (Low pressure) (section "d" in the figure).

Twinning Kit: CMY-R100CBK2

CMY-R100CBK2





The angle of the branch pipe for hign pressure is within ±15°

2. Use the attached pipe to braze the port-opening of the distribute
3. Pipe diameter is indicated by inside diamete
4. Only use the Twinning pipe by Mitsubishi (optional parts)

Model: PURY-HP72TKMU-A-H – DIMENSIONS

Unit: mm (in.)

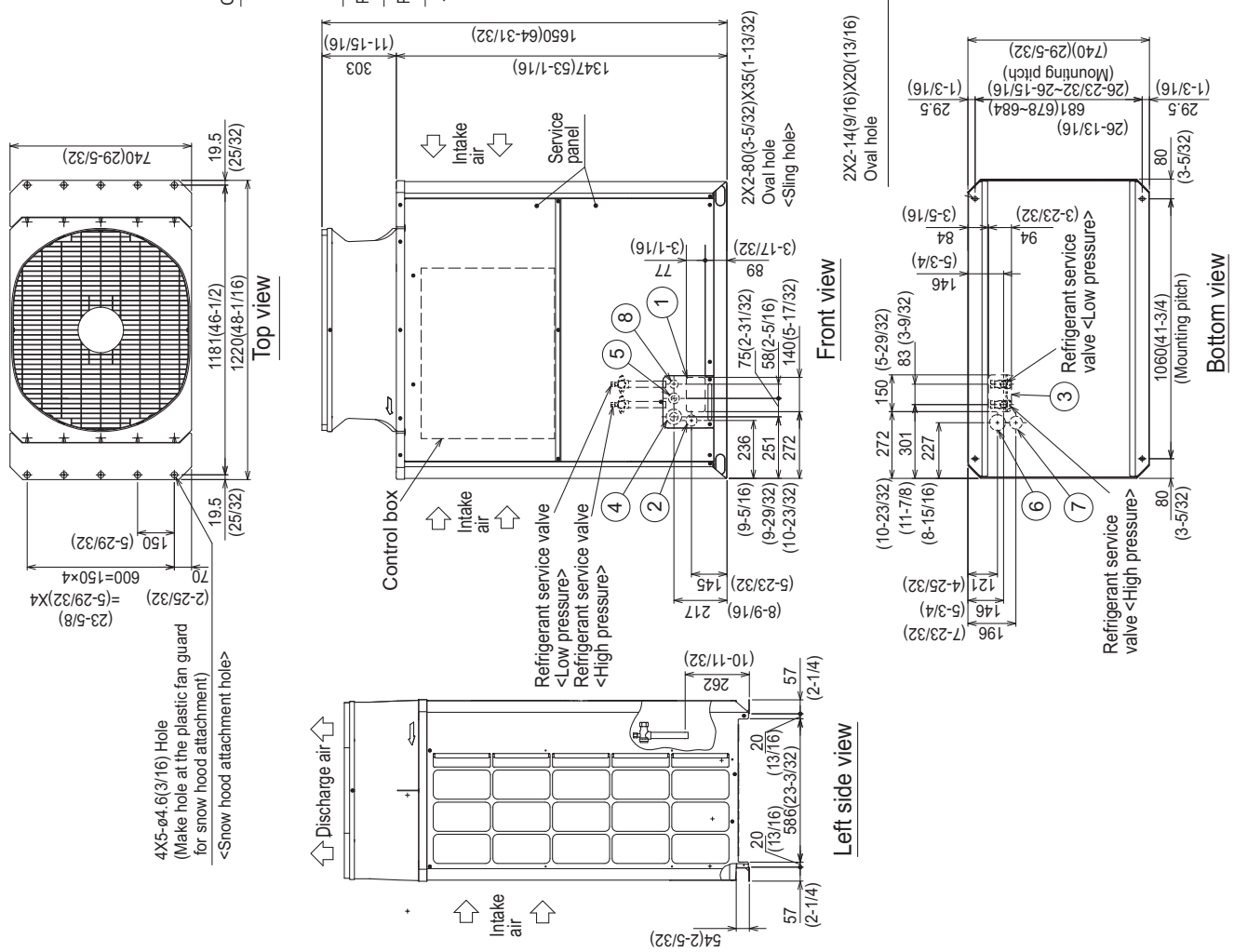
At brazing of pipes,wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).

Connecting pipe specifications

Model	Diameter			
	Refrigerant pipe		Service valve	
	High pressure	Low pressure	High pressure	Low pressure
PURY-HP72TKMU-A-H(-BS)	ø15.88 Brazed (5/8) *1	ø19.05 Brazed (3/4) *1	ø25.4 (1)	ø25.4 (1)
PURY-HP96TKMU-A-H(-BS)	ø19.05 Brazed (3/4) *1	ø22.2 Brazed (7/8) *1	ø25.4 (1)	ø25.4 (1)

1 Use the pipe joint(field supply) and connect to the refrigerant service valve piping.

NO.	Usage		Specifications
①	For pipes	Front through hole	140 × 77 Knockout hole (5-17/32) (3-1/16)
②		Front through hole (Uses when twinning kit (optional parts) is mounted.)	ø45 Knockout hole (1-25/32)
③		Bottom through hole	150 × 94 Knockout hole (5-29/32) (3-23/32)
④	For wires	Front through hole	ø62.7 or ø34.5 Knockout hole (2-15/32) (1-3/8)
⑤		Front through hole	ø43.7 or ø22.2 Knockout hole (1-3/4) (7/8)
⑥		Bottom through hole	ø65 Knockout hole (2-9/16)
⑦		Bottom through hole	ø52 Knockout hole (2-1/16)
⑧	For transmission cables	Front through hole	ø34 Knockout hole (1-11/32)



Mitsubishi Electric Air Conditioning & Refrigeration Systems Works acquired ISO 9001 certification under Series 9000 of the International Standard Organization (ISO) based on a review of quality warranties for the production of refrigeration and air conditioning equipment.

ISO Authorization System
The ISO 9000 series is a plant authorization system relating to quality warranties as stipulated by the ISO. ISO 9001 certifies quality warranties based on the "design, development, production, installation and auxiliary services" for products built at an authorized plant.

Certificate Number FM33568

Mitsubishi Electric Air Conditioning & Refrigeration Systems Works acquired environmental management system standard ISO 14001 certification.

The ISO 14000 series is a set of standards applying to environmental protection set by the International Standard Organization (ISO).

Certificate Number EC97J1227

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Mitsubishi Electric Sales Canada Inc.
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Specifications are subject to change without notice.

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